UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/581,999 | 03/20/2007 | William Warrillow | 2380-1368 | 9272 |

23117 7590 04/13/2011
NIXON & VANDERHYE, PC
901 NORTH GLEBE ROAD, 11TH FLOOR
ARLINGTON, VA 22203

| EXAMINER | |
|---|---|
| HAILE, AWET A | |
| ART UNIT | PAPER NUMBER |
| 2474 | |
| MAIL DATE | DELIVERY MODE |
| 04/13/2011 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/581,999 | WARRILLOW ET AL. | |
| | Examiner | Art Unit | |
| | AWET HAILE | 2474 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *28 January 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *22-46* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *22-36 and 39-46* is/are rejected.

7)☒ Claim(s) *37-38* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *01/28/2011*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

1. **Claims 22-46** are pending on this application.

**Claims 1-21** are cancelled.

## Response to Arguments

2. Applicant's arguments with respect to amended claims **22-46** have been considered but are moot in view of the new ground(s) of rejection.

## Claim Objections

3. **Claims 23-24** are objected to because of the following informalities.

**For Claim 23** the occurrence of "shared by shared by " in line 3, seems a typo error, if this is true, it is suggested to applicant to change "shared by shared by "to "shared by ". Similar problem exist in claim 24 line 3.

Appropriate corrections are required.

## Claim Rejections – 35 USC§ 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. **Claims 22-36, 39-44 and 46** are rejected under 35 U.S.C. 103(a) as being unpatentable over Cecile (European Patent Application EP 1220557A1) in view of Johansson et al (US 2004/0219912 A1).

**Regarding claim 22,** Cecile '557 discloses, a method for managing resources in a communication system having resources shared by at least two operators( see paragraphs 60-61 and Fig. 6, i.e., operators A, B and C sharing, access shared spectrum 602 which is managed by common controller 606), comprising: receiving an access request for a first operator of the at least two operators (see paragraphs 61, 65, and Figs. 6, 8, i.e., common controller 606 receiving shared spectrum access request from operator B); executing a first determination whether there are sufficient amount of free resources shared by, the at least two operators available in the communication system (see paragraphs 44-46, 74-75 and Fig. 8 step 842, determining whether available bandwidth on shared spectrum is enough to accept a demand), executing a third determination whether a total amount of said resources shared by the at least two operators in use for the first operator exceeds a second threshold( see paragraphs 61-62, 69, i.e., determining whether shared resources use by an operator exceeds target threshold assigned to the operator), and deciding on accepting the access request based on the results of the first (see paragraphs 44-46, 74-75 and Fig. 8, step 842-846, i.e., determining whether to accept the request by determining checking the available bandwidth on the shared spectrum), third determination (see paragraphs 61-62, 69 and Fig. 8, i.e., determining whether to accept a resource request by comparing shared resources use by an operator with target threshold assigned to the operator).

Cecile '557 does not explicitly teach, executing a second determination whether a total amount of said resources shared by the at least two operators in use in the communication system exceeds a first threshold; deciding on accepting the access request based on the results of second determinations.

However, the above mentioned claimed limitation is well known in the art, as evidenced by Johansson '912. In particular, Johansson '912 teaches, executing a second determination whether a total amount of said resources shared by the at least two operators in use in the communication system exceeds a first threshold ( see paragraphs 33, 35, 37 and Fig. 2 , table 3, i.e., determining the total load of a shared cell using a load threshold for the shared cell); deciding on accepting the access request based on the results of second determinations( se see paragraphs 33, 35, 37 and Fig. 2 , table 3., i.e., determining whether to accept resource request from an operator by checking the load threshold for the shared cell).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate, the method of determining whether to accept resource request at a shared cell from an operator, by comparing the total load of the cell to a load threshold as taught by Johansson '912, into the communication system of Cecile '557, in order to provide means fro exchanging usage information in the multi-operator mobile network, as suggested by Johansson '912(see abstract).

**Regarding claim 23,** the combination of Cecile '557 and Johansson '912 discloses, a method wherein the step of executing the second determination is performed only if the first determination shows that there are sufficient free resources shared by shared by the at least two operators available in the communication system (see Cecile '557, paragraphs 44-46, 74-75 and

Fig. 8, step 842-846, i.e., determining whether available bandwidth on shared spectrum is enough and if enough bandwidth exist determining whether additional spectrum can be given to accept more calls).

**Regarding claim 24,** the combination of Cecile '557 and Johansson '912 discloses, wherein the access request is accepted if the second determination shows that the total amount of resources shared by the at least two operators in use in the communication system does not exceed the first threshold (see Cecile '557, paragraphs 43-44, 74-75, i.e., allowing new calls if the amount of shared resources is not exceeding a predetermined threshold).

**Regarding claim 25,** the combination of Cecile '557 and Johansson '912 discloses, the act of size discrimination based on the capacity requested by the incoming connection dependent on the total amount of resources shared by the at least two operators in use in the communication system if the second determination shows that the total amount of resources shared by the at least two operators in use in the communication system does not exceed the first threshold ( see Johansson '912, paragraphs 33, 35, 37 and Fig. 2 , table 3, i.e., determining the total load of a shared cell using a load threshold for the shared cell).

**Regarding claim 26,** the combination of Cecile '557 and Johansson '912 discloses, determination of a threshold class dependent on the total amount of resources shared by the at least two operators in use in the communication system (see Cecile '557, paragraphs 39, 42-43 and figs. 2-4, dynamic thresholds based on available resources);

comparing an amount of resources required by the access request with a maximum accepted size associated with the determined threshold class( see Cecile '557, paragraphs 52-55 and Fig.5, i.e. comparing new call service request with the admission proprietary threshold);

accepting the access request if the amount of resources required by the access request is smaller than or equal to the maximum accepted size( see Cecile '557, paragraphs 52-55 and fig. 5, i.e. accepting the requested service if the service request is less than the threshold); and rejecting the access request if the amount of resources required by the access request is larger than the maximum accepted size( see Cecile '557, paragraphs 52-55 and Fig. 5, i.e., rejecting the requested service if it's greater than the threshold).

**Regarding claim 27,** the combination of Cecile '557 and Johansson '912 discloses, wherein the act of executing the third determination is performed only if the second determination shows that the total amount of resources shared by the at least two operators in use in the communication system exceeds the first threshold (see Cecile '557, paragraphs 52-54 and Fig. 5, i.e., accepting/rejecting access requests based on two thresholds).

**Regarding claim 28,** the combination of Cecile '557 and Johansson '912 discloses, wherein the access request is accepted if the third determination shows that the total amount of resources shared by the at least two operators in use for the first operator does not exceed the second threshold (see Cecile '557, parag71-74 and Figs. 5, 8, i.e., accepting the access request if the amount of resource available doesn't exceed a second threshold).

**Regarding claim 29,** the combination of Cecile '557 and Johansson '912 discloses, wherein the first threshold is equal to a pre-determined congestion threshold shared by the at least two operators (see Johansson '912, Fig. 8, i.e., step 814 a predetermined operator proprietary threshold).

**Regarding claim 30,** the combination of Cecile '557 and Johansson '912 discloses, wherein the first threshold is equal to a pre-determined congestion threshold shared by the at

least two operators minus the amount of resources required by the access request (see paragraphs 42-44 and Figs. 2-4, i.e., predetermined operator proprietary threshold between admission threshold and depart or drop thresholds).

**Regarding claim 31,** the combination of Cecile '557 and Johansson '912 discloses, wherein the second threshold is equal to a pre-determined portion of the total resources shared by the at least two operators allocated to the first operator (see Johansson '912, paragraphs 35-37 and Fig.3, i.e., comparing operator's use of shared resources with a predetermined load threshold).

**Regarding claim 32,** the combination of Cecile '557 and Johansson '912 discloses, wherein the second threshold is equal to a pre-determined portion of the total resources shared by the at least two operators allocated to the first operator minus the amount of resources required by the access request (see Cecile '557, paragraphs 42-44 and Figs. 2-4, i.e., predetermined depart threshold between the operator proprietary threshold and drop thresholds).

**Regarding claim 33,** the combination of Cecile '557 and Johansson '912 discloses, further comprising the act of storing a respective measure of the fraction of resources shared by the at least two operators currently in use by each of said at least two operators( see Cecile '557, paragraphs 51-52, i.e., the common controller 606 storing shared spectrum use of operators A , B and C in order to determine new call acceptance), said measure for the first operator being updated upon accepting the access request or when an already established connection for the first operator is terminated( see paragraphs 52-54, i.e., updating operators use of the shared spectrum).

**Regarding claim 34,** the combination of Cecile '557 and Johansson '912 discloses, updating the respective measures by means of resource utilisation information from an external source (see Johansson '912, paragraphs 29-31 and Figs. 2-3, i.e., using the eIur(-g) interface to update usage shared resources).

**Regarding claim 35,** the combination of Cecile '557 and Johansson '912 discloses, wherein the access request is rejected if the first determination shows that there are not sufficient free resources available in the communication system **or** if the third determination shows that the total amount of resources shared by the at least two operators in use for the first operator exceeds the second threshold (see Cecile '557, paragraph 72 and Fig. 8, step 814, i.e., determining whether a call can be accepted by a proprietary system by comparing the call impact with a threshold).

**Regarding claim 36,** the combination of Cecile '557 and Johansson '912 discloses, evaluating a priority of the access request if the first determination shows that there are not sufficient free resources shared by the at least two operators available in the communication system or if the third determination shows that the total amount of resources shared by the at least two operators in use for the first operator exceeds the second threshold ( see Cecile '557, paragraphs 76-81 and Fig.9, i.e., if access to the shared spectrum by the operators exceeds the threshold using a priority level to allow access to the shares spectrum).

**Regarding claim 39,** the combination of Cecile '557 and Johansson '912 discloses, wherein the act of receiving an access request for the first operator in turn receiving a renegotiation request for an ongoing call from the first operator( see Cecile '557, paragraphs 64

65 and Fig.7, i.e., common controller 702 and local controller 704 communicating access request and grant information);

providing a supplementary access request for the first operator having an access request size corresponding to the difference between a requested size and a present size of the ongoing call, if the requested size is larger than the present size (see Cecile '557, paragraphs 69-72, i.e., local controller B reducing the access request); and performing a change of resource utilisation for the ongoing call, if the present size is larger than the requested size (see Cecile '557, paragraphs 70-73 and Figs. 7-8, i.e., common controller 702 changing resource allocation based on available resources).

**Regarding claim 40,** Cecile '557 discloses, a device for managing resources in a communication system (see paragraphs 61, 65, and Figs. 6, 8, i.e., common controller 606 receiving shared spectrum access request from operator B), the communication system having resources shared by at least two operators (see paragraphs 60-61, and Fig. 6, i.e., operators A, B and C sharing, access shared spectrum 602 which is managed by common controller 606), said device comprising:

means for receiving an access request for a first operator of the at least two operators( see fig. 7, i.e. common controller 702 receiving a resource request); means for receiving an access request for a first operator of the at least two operators; means for executing a first determination whether there are sufficient amount of free resources shared by the at least two operators available in the communication system (see paragraphs 44-46, 74-75 and Fig. 8 step 842, determining whether available bandwidth on shared spectrum is enough to accept a demand), means for executing a third determination whether a total amount of said resources shared by the

at least two operators in use for the first operator exceeds a second threshold( see paragraphs 61-62, 69, i.e., determining whether shared resources use by an operator exceeds target threshold assigned to the operator), and means for deciding on accepting the access request based on the results of the first (see paragraphs 44-46, 74-75 and Fig. 8, step 842-846, i.e., determining whether to accept the request by determining checking the available bandwidth on the shared spectrum), third determination (see paragraphs 61-62, 69 and Fig. 8, i.e., determining whether to accept a resource request by comparing shared resources use by an operator with target threshold assigned to the operator).

Cecile '557 does not explicitly teach, means for executing a second determination whether a total amount of said resources shared by the at least two operators in use in the communication system exceeds a first threshold; means for deciding on accepting the access request based on the results of second determinations.

However, the above mentioned claimed limitation is well known in the art, as evidenced by Johansson '912. In particular, Johansson '912 teaches, executing a second determination whether a total amount of said resources shared by the at least two operators in use in the communication system exceeds a first threshold ( see paragraphs 33, 35, 37 and Fig. 2 , table 3, i.e., determining the total load of a shared cell using a load threshold for the shared cell); deciding on accepting the access request based on the results of second determinations( se see paragraphs 33, 35, 37 and Fig. 2 , table 3., i.e., determining whether to accept resource request from an operator by checking the load threshold for the shared cell).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate, the method of determining whether to accept resource

request at a shared cell from an operator, by comparing the total load of the cell to a load threshold as taught by Johansson '912, into the communication system of Cecile '557, in order to provide means fro exchanging usage information in the multi-operator mobile network, as suggested by Johansson '912(see abstract).

**Regarding claim 41,** Cecile '557 discloses, an arrangement comprising a device for managing resources in a communication system (see paragraphs 61, 65, and Figs. 6, 8, i.e., common controller 606 receiving shared spectrum access request from operator B), the communication system having resources shared by at least two operators (see paragraphs 60-61, and Fig. 6, i.e., operators A, B and C sharing, access shared spectrum 602 which is managed by common controller 606), said device comprising

means for receiving an access request for a first operator of the at least two operators; means for executing a first determination whether there are sufficient amount of free resources shared by the at least two operators available in the communication system (see paragraphs 44-46, 74-75 and Fig. 8 step 842, determining whether available bandwidth on shared spectrum is enough to accept a demand), means for executing a third determination whether a total amount of said resources shared by the at least two operators in use for the first operator exceeds a second threshold( see paragraphs 61-62, 69, i.e., determining whether shared resources use by an operator exceeds target threshold assigned to the operator), and means for deciding on accepting the access request based on the results of the first (see paragraphs 44-46, 74-75 and Fig. 8, step 842-846, i.e., determining whether to accept the request by determining checking the available bandwidth on the shared spectrum), third determination (see paragraphs 61-62, 69 and Fig. 8,

i.e., determining whether to accept a resource request by comparing shared resources use by an operator with target threshold assigned to the operator).

Cecile '557 does not explicitly teach, means for executing a second determination whether a total amount of said resources shared by the at least two operators in use in the communication system exceeds a first threshold; means for deciding on accepting the access request based on the results of second determinations.

However, the above mentioned claimed limitation is well known in the art, as evidenced by Johansson '912. In particular, Johansson '912 teaches, executing a second determination whether a total amount of said resources shared by the at least two operators in use in the communication system exceeds a first threshold ( see paragraphs 33, 35, 37 and Fig. 2 , table 3, i.e., determining the total load of a shared cell using a load threshold for the shared cell); deciding on accepting the access request based on the results of second determinations( se see paragraphs 33, 35, 37 and Fig. 2 , table 3., i.e., determining whether to accept resource request from an operator by checking the load threshold for the shared cell).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate, the method of determining whether to accept resource request at a shared cell from an operator, by comparing the total load of the cell to a load threshold as taught by Johansson '912, into the communication system of Cecile '557, in order to provide means fro exchanging usage information in the multi-operator mobile network, as suggested by Johansson '912(see abstract).

**Regarding claim 42,** the combination of Cecile '557 and Johansson '912 discloses, wherein the arrangement is a shared universal mobile telecommunication system terrestrial radio

access network and the device is comprised in a radio network controller (see Cecile '557, paragraph 28 using the resource sharing system in a UMTS controlled by RNC).

**Regarding claim 43,** the combination of Cecile '557 and Johansson '912 discloses wherein the arrangement is the communication system (see rejection of claim 41 above).

**Regarding claim 46,** Cecile '557 discloses, a node for managing resources in a communication system (see paragraphs 61, 65, and Figs. 6, 8, i.e., common controller 606 receiving shared spectrum access request from operator B), the communication system comprising a radio access network (RAN) having resources shared by at least two operators( see paragraphs 60-61, and Fig. 6, i.e., operators A, B and C sharing, access shared spectrum 602 which is managed by common controller 606), said device comprising:

means for receiving an access request for a first operator of the at least two operators system (see paragraphs 61, 65, 71-73 and Figs. 8 steps 812- 822 i.e., common controller 606 receiving shared spectrum access request from operators A/B/C);

a shared resources manager configured to execute plural determinations and to decide on accepting the access request based on the results of the plural determinations(see paragraphs 44-46, 72, 74-75 and Fig. 8, steps 814, 842-846 i.e., determining whether a call can be accepted by a proprietary system by comparing the call impact with a threshold and determining whether available bandwidth on shared spectrum is enough to accept a demand and based on the determining steps deciding whether to accept the request);

the plural determinations including: a first determination whether there are sufficient amount of free resources shared by the at least two operators available in the communication system (see paragraphs 44-46, 74-75 and Fig. 8 step 842, determining whether available

bandwidth on shared spectrum is enough to accept a demand), a third determination whether a total amount of said resources shared by at least two operators in use for the first operator exceeds a second threshold(see paragraphs 61-62, 69 and Fig. 8, i.e., determining whether to accept a resource request by comparing shared resources use by an operator with target threshold assigned to the operator).

Cecile '557 does not explicitly teach, a second determination whether a total amount of said resources shared by at least two operators in use in the communication system exceeds a first threshold.

However, the above mentioned claimed limitation is well known in the art, as evidenced by Johansson '912. In particular, Johansson '912 teaches, a second determination whether a total amount of said resources shared by at least two operators in use in the communication system exceeds a first threshold ( see paragraphs 33, 35, 37 and Fig. 2 , table 3, i.e., determining the total load of a shared cell using a load threshold for the shared cell).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate, the method of determining whether to accept resource request at a shared cell from an operator, by comparing the total load of the cell to a load threshold as taught by Johansson '912, into the communication system of Cecile '557, in order to provide means fro exchanging usage information in the multi-operator mobile network, as suggested by Johansson '912(see abstract).

7. **Claim 45** is rejected under 35 U.S.C. 103(a) as being unpatentable over Cecile '557 in view of Johansson '912 and Peltola et al(US 7218937 B2).

**Regarding claim 45,** the combination of Cecile '557 and Johansson '912 does not explicitly teach, wherein the second threshold is related to an agreed proportion of resources shared by the at least two operators for use by the first operator.

However, the above mentioned claimed limitation is well known in the art, as evidenced by Peltola '937. In particular, Peltola '937 teaches, wherein the second threshold is related to an agreed proportion of resources shared by the at least two operators for use by the first operator (see column 3 lines 20- column 4 line 52 and Figs. 1, 5, 6, i.e., determining whether the amount of resources used by the operator B is greater than a threshold, notice the threshold indicates operator B maximum use of assigned resources).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate, the method of comparing operators current resource use with a threshold and determining on whether to accept or reject resource request based on the determining as taught by Peltola '937, into the combined communication system of Cecile '557 and Johansson '912, such modification would enable an optimum radio resource management- and hardware usage, as taught by Peltola '937( see column 1 lines 19-28).

## Allowable Subject Matter

8. **Claims 37 and 38** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

## Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, Uddenfeldt (US 5805633 A), Kuchibhotla et al (US 2005/0075129 A1), Cave (US 2005/0124353 A1) are recited to show shared resources management.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AWET HAILE whose telephone number is (571)270-3114. The examiner can normally be reached on Monday through Friday 8:30 AM - 4:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Aung Moe can be reached on (571)272-7314. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Aung S. Moe/
Supervisory Patent Examiner, Art Unit 2474

/AWET HAILE/
Examiner, Art Unit 2474